*STATE FOREST LAND*
**ENVIRONMENTAL CHECKLIST**

**Purpose of Checklist:**

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

**Instructions for Applicants:**

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

**Use of checklist for nonproject proposals:**

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

**A. BACKGROUND**

1. Name of proposed project, if applicable:

   *Timber Sale Name*: **LOST PINE** *Agreement #:* **30-075657**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:

   **Candace Johnson**
   **919 N. Township Street**
   **Sedro Woolley, WA. 98284 phone: 360-856-3500**

4. Date checklist prepared: **1/26/04**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date* **3/21/05**
   b. *Planned contract end date (but may be extended):* **9/30/06**
   c. *Phasing:* **NA**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   *Timber Sale*

   a. *Site preparation:* **None Planned**
   b. *Regeneration Method:* **Hand planting**
   c. *Vegetation Management:* **Treatment needs will be assessed in 3 to 5 years after planting.**
   d. *Thinning:* **Treatment needs will be assessed in 15 to 18 years after planting.**

   *Roads:*

   **The P-1070 and portions of Spur A along with the SA-1880 and portions of Spur C forest roads will be extended for future harvest activity. The existing P-1000, 1010, 1070, SA-1800, 1880, and U-1000 roads will be maintained and used for future management activities**

   *Rock Pits and/or Sale:*

   **Rock pits and permanent roads designated for this timber sale will be used for future management activities.**

   *Other:* **None**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐*303 (d) – listed water body in WAU:* ☐*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
☐*Land*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **District Road Plan dated 12/12/03 for the Lost Pine Timber Sale is available at the Region office in Sedro Woolley.**
☐*Wildlife report:*
☐*Geotechnical report:*
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **District Road Plan dated 12/12/03 for the Lost Pine Timber Sale is available at the Region office in Sedro Woolley.**
☐*Other:*

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

**No**

10. List any government approvals or permits that will be needed for your proposal, if known.

☐*HPA* ☐*Burning permit* ☐*Shoreline permit* ☐*Incidental take permit* ☒*FPA #* _____ ☐*Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description:*

**Harvest:**
**Size:** **95 acres, net**
**Estimated volume:** **2,308 MBF**
**Largest unit:** **95 acres, net**
**Harvest system:** **High lead cable, and ground based by excavator with grapple (shovel)**
**Roads:**
**Existing:** **Construct or reconstruct approximately 11,925 feet of logging road.**
**Abandonment:** **Abandon 2,273 feet of constructed road at the completion of logging.**
**Rock pits:**
**Existing:** **Continue development of the Breckenridge rock pit.**
**Expand the P-1010 and the Bummer rock pits by ¼ acre each.**

**This proposal is a single unit harvest of second growth hardwood and conifer. The planning area included about 147 acres. After adjacency green up, stream bank protection, areas of possible instability, areas of low site productivity, and areas not practical to log were identified, the gross acres for the final proposal was 100. Further acreage reductions from green tree retention (716 trees in 17 clumps and 47 individually standing trees) brought the net acres to 95. See the timber sale map.**

**9.8 miles of existing forest road (the P-1000, 1070, SA-1800, 1880, and the U-1000) access the sale area. The existing Breckenridge, Bummer, and P-1010 rock pits are accessed by an additional 1.5 miles of existing forest road. The single unit sale will be accessed from both the north and south sides.**

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*

**The proposal area is a regeneration harvest comprised of a mix of naturally regenerated conifers and hardwoods (Douglas-fir, western hemlock, western redcedar, white pine, Pacific silver fir, Sitka spruce, and very few hardwoods (mainly birch). There is one area where large (24" to 58") Douglas-fir trees occur in a pocket and will be retained in a green tree clump and a few scattered trees. There are several snags on site, ranging from 20' to 60' high averaging around 18" diameter at breast height. These will be retained in green tree clumps where possible. Stand age is around 120 years. Tree heights range from 40' to about 110', depending on the site.**

**Unit objectives include the generation of revenue for the Common School trust (03), the preservation of the timber environment around a small wetland, the preservation of multi-species canopy within rocky areas, future harvest road access, and the retention of large conifer trees available over the proposal as an investment toward structural and landscape diversity.**

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

| Type of Activity | How Many | Length (feet) (Estimated) | Acres (Estimated) | Fish Barrier Removals (#) |
|---|---|---|---|---|
| Construction | | 7853 | 3 | |
| Reconstruction | | 4072 | | 0 |
| Abandonment | | 2273 | 1 | 0 |
| Bridge Install/Replace | 0 | | | |
| Culvert Install/Replace (fish) | 0 | | | |
| Culvert Install/Replace (no fish) | 34 | | | |

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:

**This proposal is located in parts of the east half of Sections 29 and 30, Township 40 North, Range 5 East, Willamette Meridian. The rock pits are located in: (P-1010 pit) Section 31, and (Breckenridge pit), Section 30, both in Township 40 North, Range 5 East, Willamette Meridian, (Bummer pit) Section 1, Township 39 North, Range 4 East, Willamette Meridian.**

b. *Distance and direction from nearest town (include road names):*

**Access the north side by taking S.R. 542 from Bellingham 0.95 miles east of mile point 9 at Nugents Corner. Turn left on S.R. 9 and go 1.1 miles to Siper Road, then right for 1.8 miles to Hopewell Road, right for 0.2 miles to Goodwin Road, left for 2.6 miles to South Pass Road, right for 5.6 miles to Paradise Road (also the SA-1000), right for 1.6 miles to the SA-1800 (not labeled), right for 1.7 miles to the SA-1880 (not labeled), then left for 0.2 miles to station 0+00 of Spur C.**

**Access the south side by taking S.R. 542 0.8 miles east of mile point 20 to the U-1000 road (not labeled) where there is a gate (kept unlocked as of the date of this document), left 4.1 miles to the P-1000 road (not labeled), left 1.2 miles to the P-1070 (not labeled), right 0.9 miles to station 0+00 of Spur A.**

**All three rock pits are within one mile of the proposal, and are accessed by existing logging roads. Refer to this sale's vicinity map.**

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

| WAU name | WAU acres | Proposal acres |
|---|---|---|
| SUMAS RIVER | 36280 | 2 |
| Sub basin 9 | 1736 | 2 |

| WAU name | WAU acres | Proposal acres |
|---|---|---|
| VEDDER | 21289 | 93 |
| Sub basin 1 | 8,024 | 93 |

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

**The following information is derived from local knowledge and the Department of Natural Resources (DNR) Geographic Information System (GIS), which includes the SEPA reports for the Vedder and Sumas River Watersheds and Sub basins 1 and 9, respectively. It is also derived from Proprietary Data and Fish and Wildlife Risk Assessment Maps, the Watershed Administrative Unit Map, and the Adjacency Map. GIS information in the table below was taken from data runs dated 10/22/03.**

| WAU, Sub Basins | Total Acres | Non DNR acres | % Private land | DNR managed forest acres | % DNR managed forest land | Hydrologically mature DNR managed land in SROS zone | Percent hydrological Mature DNR managed land in SROS zone | Proposal acres |
|---|---|---|---|---|---|---|---|---|
| Vedder | 21,290 | 17,645 | 83 | 3,645 | 17 | 1,294 | 6 | 93 net |
| Sub 1 | 8,024 | 5,176 | 65 | 2,848 | 35 | 1,036 | 9 | 93 net |
| Sumas River | 36,280 | 33,314 | 92 | 2,966 | 8 | 1,459 | > 99 | 2 net |
| Sub 9 | 1,737 | 1,256 | 72 | 481 | 28 | 140 | < 1 | 2 net |

**This proposal is located on the northeast side of Sumas Mountain about 2 ½ miles west of Kendall. A watershed analysis has not been done for either WAU. 24% of sub 9 and 18% of sub 1 is in the significant rain on snow zone, therefore these sub basins will not be managed for rain on snow as outlined in the HCP.**

**Refer to the GIS generated Watershed Administrative Unit map that shows forestland activity within the Vedder and Sumas River WAU's. There are no 303d listed waters in the Vedder WAU where 98% of this proposed activity occurs. The Sumas River WAU shows a 303d listed stream (Johnson Creek). The 2 acres of activity within the Sumas River WAU are on a broad ridge top with no overland flow involved.**

**Sub basin 1 activity (Vedder WAU):**

**Three State regeneration harvest sales (North Sumas, X-Gene, and Pine Prospect) have been completed within the last 7 years and one (Hidden Valley) is scheduled totaling 200 acres. There has been no thinning activity. An estimated 450 acres of harvesting and thinning has occurred on private land. Total activity over the last 7 years has been about 650 acres within sub basin 1.**

**Sub basin 9 activity (Sumas River WAU):**

**Three State regeneration harvest sales (Canado, Silver Alder, and Vedder) have been completed within the last 7 years totaling 105 acres. There has been no thinning activity. An estimated 400 acres of harvesting and thinning has occurred on private land. Total activity over the last 7 years has been about 505 acres within sub basin 9.**

**The cumulative impacts from this proposal and other State harvests listed above are mitigated through compliance with Forest Practice regulations, the DNR Forest Resource Plan, and the DNR-US Fish and Wildlife Service Habitat Conservation Plan.**

**Environmental elements include impacts to the earth, surface and ground water, and wildlife habitat. Specific mitigations for these elements are listed below and may be reviewed in more detail within their respective portions of this document.**

**EARTH:**

**Required front end suspension of logs during cable yarding, road location favorable to uphill cable yarding, bounding potentially unstable areas out of the sale, requiring hand felling of trees to reduce the soil compaction by heavy equipment, requiring ground based equipment to be limited to operating on slopes less than 25%, operate in the dry season. Additional specifications that are part of this proposal's contract are available at the Sedro Woolley region office, restricting rock and timber hauling to the drier seasons, and abandoning 0.4 miles of the newly constructed roads are all intended to reduce impacts to the earth. See B-1-d-4 and 5 and B-1-h.**

**SURFACE and GROUND WATER:**

**Hydrologic maturity analyses are used to space timber harvests over time. Inner gorges and incised banks have been and will continue to be avoided. About 90% of the cable logging will be uphill yarding. Roads will be constructed and maintained according to current Forest Practice standards. All these are designed to reduce impacts to water. See B-3-a-2, 14 and 16, and B-3-c-1, and B-3-d.**

**WILDLIFE HABITAT:**

**There is a small pocket of large Douglas-fir trees on the proposal. This small pocket of Douglas-fir and other individually occurring large conifers, which have the potential for developing large limbs and structural uniqueness, will be retained. This, in combination with the buffer along the interior type 5 will help preserve and enhance structural, species, and landscape diversity. See B-4-b-2, and B-4-d.**

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☐Hilly, ☐Steep Slopes, ☒Mountainous, ☐Other:

1) *General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).*

**Sumas Mountain:**
**The forested slopes of the north end of Sumas Mountain drain into Breckenridge and Saar Creeks and ultimately the Fraser River. The climate is typical of the western slopes of the Cascade Range and is influenced by Mount Baker and the Fraser River. Average rainfall is approximately 40 inches and greater on about 42% of the WAU. Elevation ranges from less than 300' to about 3300'. The major timber types are original growth and second growth conifer. The northwest portion of Sumas Mountain appears to have burned 90 to 95 years ago.**

**Vedder:**
**The forested portions are dominated by second growth conifer with scattered remnant old growth Douglas-fir and deciduous species. The climate is typical of the western slopes of the Cascade Range, with local influence from Mount Baker and the Fraser River. Average rainfall is approximately 70 inches per year. Characteristic aspects are north and northwest with an elevation range of 800' to 2400'.**

2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*

**None**

b. What is the steepest slope on the site (approximate percent slope)?

**120%**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

| State Soil Survey # | Soil Texture | % Slope | Acres | Mass Wasting Potential | Erosion Potential |
|---|---|---|---|---|---|
| 8210 | Typic Cryorthods-rock outcrop | 60-90 | 62 | No data, estimated to be high** | No data, estimated to be high** |
| 5711 | Oso | 5-30 | 19 | Insignificant | Medium |
| 5712 | Oso | 30-60 | 14 | Medium | High |
| 7314 | Serpod | 30-60 | 3 | Medium | Medium |

**** "No data" was used in the table on page 6 question 7.**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) *Surface indications:*

**There are no surface indications of unstable soils in the immediate vicinity.**

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

**Vedder WAU, Sub 1:**
**Deep seated slide activity has occurred where the SA-1000 crosses Sarr Creek (The SA-1000 crossing over the creek has been closed)**

**Sumas River WAU, Sub 9:**
**There are several shallow rapid slides along Breckenridge Creek.**

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
*Associated management activity:*

**Sumas River WAU, Sub 9:**
**There have been small cut or fill slope failures due to road drainage problems in the Breckenridge drainage.**

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

**Two areas totaling less than two acres were considered as potentially unstable by the region geologist although they showed no evidence of recent instability. Therefore these areas were bounded out of the harvest. A small buffer ranging from 20' to 50' placed to protect stream bank integrity and water quality was left on both sides of a type 5 stream flowing through the center of the unit. Surface disturbance will be minimized by using high lead cable yarding for the majority of the harvest area. Roads have been located to avoid steep, potentially unstable slopes.**

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill..
*Approx. acreage new roads: 3* *Approx. acreage new landings: **0.2*** *Fill source:* **Breckenridge and P-1010 rock pits. Road surfacing will come from the Bummer Pit.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

**Erosion could occur as a result of road and landing construction. Erosion could occur on forest access roads during wet weather hauling.**

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

**About 3% of the total proposed site will remain covered with gravel roads to be used for future management activities.**

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
*(Include protection measures for minimizing compaction or rutting.)*

**One end suspension of logs is required during all cable yarding. Most cable yarding (about 84 acres) will be uphill, thus minimizing disturbance to the soils. Shovel yarding will be limited to the drier season, and to slopes 25% or less. Minimize compaction and soil displacement on shovel ground by requiring hand felling of trees. The seasonal haul restriction limits all road hauling to the drier times of year. Roads will be revegetated following construction, reconstruction, and abandonment. Reconstruction work will add several new culverts to existing roads that will reduce surface erosion.**

**2. Air**

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

**There will be minor amounts of equipment exhaust from trucks, crew vehicles, chain saws and yarding equipment. There will be wood smoke, if landing slash is burned. There may be dust from vehicle traffic during periods of dry weather.**

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

**No**

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

**Slash burning, if done, will be done with a burning permit under smoke management guidelines.**

**3. Water**

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

*a) Downstream water bodies:*

**Sarr Creek (type 3) and Sumas River (type 1+)**

b) *Complete the following riparian & wetland management zone table:*

| Wetland, Stream, Lake, Pond, or Saltwater Name (if any) | Water Type | Number (how many?) | Avg RMZ/WMZ Width in Feet (per side for streams) |
|---|---|---|---|
| **Wetland (< ¼ acre)** | -- | **1*** | -- |
| **Wetland (1/4 to 1 acre)** | -- | **1** | **100'** |
| **Unnamed stream** | **5** | **1** | **30'** |
| **Unnamed streams** | **5** | **9** | -- |
| **Unnamed stream** | **9** | **1** | -- |

***This wetland is within a tagged green tree retention clump and has a variable buffer of at least 50'. Refer to the sale map.**

c) *List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.*

**One type 5 stream located in the central portion of the unit was provided a buffer. See also B.I.d.5. The 30' average buffer along this interior type 5 stream was tagged at the break in slope over the stream in order to protect stream bank integrity and water quality. Spur C was routed to avoid a forested wetland.**

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
*Description (include culverts):*

**Road construction comes within 200' and crosses many of the described waters. No permanent surface water withdrawals or diversions will be necessary. High lead yarding roads will cross some type 5 streams. Refer to the proposal's timber sale map.**

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

**No material will be placed in or removed from surface water or wetlands.**

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☐*No* ☒*Yes, description:* **Culvert installation could require the temporary diversion of water.**

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

*7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?*

**SUSMAS RIVER:**

| | Erosion potential | | Mass wasting potential | |
|---|---|---|---|---|
| **WAU:** | | | | |
| | **Low** | **76% (27432 ac)** | **Insignificant** | **85% (30917 ac)** |
| | **Medium** | **7% (2362 ac)** | **Low** | **1% (451 ac)** |
| | **High** | **10% (3827 ac)** | **Medium** | **3% (924 ac)** |
| | **Not applicable** | **7% (2455 ac)** | **High** | **10% (3777 ac)** |
| | | | **No data** | **<1% (211 ac)** |
| **SUB-9** | | | | |
| | | | **Insignificant** | **59% (1026 ac)** |
| | **Low** | **35% (608 ac)** | **Low** | **4% (74 ac)** |
| | **Medium** | **41% (716 ac)** | **Medium** | **17% (293 ac)** |
| | **High** | **24% (413 ac)** | **High** | **20% (342 ac)** |

**VEDDER:**

| | Erosion potential | | Mass wasting potential | |
|---|---|---|---|---|
| **WAU:** | | | | |
| | | | **Insignificant** | **58% (12302 ac)** |
| | **Low** | **58% (12344 ac)** | **Low** | **12% (2507 ac)** |
| | **Medium** | **19% (4031 ac)** | **Medium** | **10% 2024 ac)** |
| | **High** | **20% (4266)** | **High** | **19% (4140)** |
| | **No Data** | **1% (292)** | **No Data** | **1% (297 ac)** |
| | **Not applicable** | **2% (338 ac)** | | |
| **SUB-1** | | | | |
| | | | **Insignificant** | **38% (760 ac)** |
| | **Low** | **27% (539 ac)** | **Low** | **1% (14 ac)** |
| | **Medium** | **50% (985 ac)** | **Medium** | **43% (854 ac)** |
| | **High** | **23% (464 ac)** | **High** | **18% (360 ac)** |

8) *Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?*
☐*No* ☒*Yes, describe changes and possible causes:*

**Sumas River:**
**Changes in channel dimensions along the courses of both Saar and Breckenridge Creeks indicate increased flows in the past. Type 4 streams near the proposed timber sale show evidence of bank erosion and channel down-cutting during seasonal storm events.**

**It is very difficult to separate the effects of peak stream flow increases from the effects of mass wasting on stream channels. The effects are interrelated and often occur during the same storm event(s).**

**Vedder:**
**None known**

9) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*
☐*No* ☒*Yes, explain:*

**Yarding across type 5 streams while they are flowing may increase turbidity during operations. There may be increased turbidity locally in the unnamed streams within and near the sale vicinity during road construction and haul.**

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*
*Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?*
☒*No* ☐*Yes, describe:*

| | Sumas River | Vedder |
|---|---|---|
| **WAU** | **3.3** | **3.6** |
| **Sub basin** | **4.4 (sub 9)** | **3.6 (sub 1)** |

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not,* ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☐*No* ☒*Yes, approximate percent of WAU in significant ROS zone.*

**Sumas River: 8% (January 2003 hydrologic maturity Run-DNR/GIS) Vedder: 20% (January 2003 hydrologic maturity Run-DNR/GIS)**

*Approximate percent of sub-basin(s):*

**Sumas River, Sub 9: 24% Vedder, Sub 1: 73%, (same report as is #11).**

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*

**Sumas River, Sub 9: On State land, 92%**
**Vedder, Sub 1: On State land, 99%**
**It is unknown at this time the amount of private ownership that is rated as hydrologically mature.**

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☐*No* ☒*Yes, describe observations:*

**See B.3.a.8.**

**Sumas River WAU:**
**Debris flows and stream channel failure appear to have occurred during peak flow periods. Numerous small road failures have occurred during winter storm events.**

**Vedder WAU:**
**None known**

**It is very difficult to separate the effects of peak stream flow increases from the effects of mass wasting on stream channels. The effects are interrelated and often occur during the same storm event(s).**

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*

**The 2 acres within the Sumas River WAU are not expected to impact that WAU since they are on a broad, essentially waterless ridge. The 93 acres of harvest activity within the Vedder WAU may increase the peak flow of Sarr Creek. Yarding across the type 5 and non-typed streams may increase turbidity on a temporary basis.**

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:* **See B-3-a-14, above.**

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

**The hydrologic maturity analysis of the Department's ownership in each WAU serves to space harvest activity through time. This proposal as well as future Department sales will avoid incised stream banks and inner gorges.**

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

**No**

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

**No such waste material will be discharged into the ground.**

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

*a) Note protection measures, if any.*

**None**

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

**Intercepted surface storm water from side slopes above newly constructed roads will be collected into roadside ditches and discharged onto stable ground.**

2) Could waste materials enter ground or surface waters? If so, generally describe.

**Accidental, minor, local spills of petroleum products may occur on roads or landings.**

*a) Note protection measures, if any.*

**Enforce contract clauses regarding the responsible use of petroleum or any environmentally toxic products.**

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
*(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)*

**Existing road (the SA-1880) will be used as much as possible, reducing the amount of new construction needed. Active roads will be maintained to minimize erosion. All roads will be constructed according to current Forest Practice standards. Road use is restricted to the drier months to reduce erosion and road damage. Exposed soils from road cuts and fills will be grass seeded. Portions of newly constructed road will be abandoned after completion of logging.**

**4. Plants**

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☐alder, ☐maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☒*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☒*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☒*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☒other: **white pine**
☒shrubs: ☐*huckleberry,* ☒*salmonberry,* ☒*salal,* ☒*other:* **sword fern**
☐grass
☐pasture
☐crop or grain
☐wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☐*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

**95 acres of naturally regenerated, second growth conifer and hardwood will be harvested.**

*1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")*

**Small conifer (6" to 10" western hemlock and Douglas-fir, 120+ years old) borders the west side. This adjacent stand is on poor growing site ground and has fewer snags and down material than the harvest area. Bordering the north side of the unit is 90 year mixed Douglas-fir, western hemlock, western redcedar, spruce, and Pacific silver fir on higher site ground. These trees are taller and larger diameter, with more down wood. Snags may be 1 to 2 per acre, and about 12"+ diameter. The east and south sides are bordered by two stands; one a young Douglas-fir stand (6 years), and the other a stand of planted Douglas-fir and naturally regenerated western hemlock, (39 years).**

2) *Retention tree plan:*

**The green tree retention plan for this proposal focuses on the distribution of largest possible conifers over the landscape and preserving some large Douglas-fir trees that show potential for developing large limbs and structural uniqueness. 763 trees will be retained at the 8 trees per acre rate: 47 of these as individually standing trees, and 716 are in 17 green tree clumps. Tree clumps were selected for large tree opportunities, snag potential, unique micro environment, and distribution over the landscape.**

c. List threatened or endangered *plant* species known to be on or near the site.

**The Department of Natural Resources TRAX Data Base detected no such species.**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

**See B-3-a-1-c and B-4-b-2, above. These retention areas serve to preserve species common to this vicinity.**

**5. Animal**

a. Circle *or check* any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☒songbirds, ☐*pigeon*, ☐other:
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
*unique habitats:* ☐*talus slopes*, ☐*caves*, ☐*cliffs*, ☐*oak woodlands*, ☐*balds*, ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

**The Department of Natural Resources TRAX Data Base detected no such species.**

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

**All of Washington State is considered part of the Pacific flyway.**

d. Proposed measures to preserve or enhance wildlife, if any:

**8 trees per acre will be left standing after harvest. These trees will benefit bird populations. Retaining the largest conifers is an investment toward species, age, and structural diversity. It is also a step toward a multi-layered canopy.**

1) *Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.*
Species /Habitat: **None** Protection Measures: **None needed**

**6. Energy and Natural Resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

**Does not apply.**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

**Does not apply.**

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

**Does not apply.**

**7. Environmental Health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, which could occur as a result of this proposal? If so, describe.

**There is a minimal petroleum product spill hazard due to heavy equipment operations. There is also a potential fire hazard if operating under fire weather conditions.**

1) Describe special emergency services that might be required.

**Does not apply.**

2) Proposed measures to reduce or control environmental health hazards, if any:

**See B-3-c-2-a, above. Contract enforcement of forest fire protection rules**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

**Does not apply.**

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

**There will be localized equipment noise during daylight hours on a short-term basis from logging equipment (yarders, loaders, dozers, trucks, and chain saws) during road and landing construction, and logging.**

3) Proposed measures to reduce or control noise impacts, if any:

**None**

**8. Land and Shoreline Use**

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*
**Commercial Forestry**

b. Has the site been used for agriculture? If so, describe.

**No**

c. Describe any structures on the site.

**There are no structures on the site.**

d. Will any structures be demolished? If so, what?

**No**

e. What is the current zoning classification of the site?

**Commercial Forestry District**

f. What is the current comprehensive plan designation of the site?

**Commercial Forestry District**

g. If applicable, what is the current shoreline master program designation of the site?

**Does not apply**

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

**No**

i. Approximately how many people would reside or work in the completed project?

**Does not apply**

j. Approximately how many people would the completed project displace?

**Does not apply**

k. Proposed measures to avoid or reduce displacement impacts, if any:

**Does not apply**

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

**This harvest has been designed to comply with the Forest Practice Regulations, the DNR Forest Resource Plan, and the DNR-US Fish and Wildlife Service Habitat Conservation Plan.**

**9. Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

**Does not apply**

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

**Does not apply**

c. Proposed measures to reduce or control housing impacts, if any:

**Does not apply**

**10. Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

**Does not apply**

b. What views in the immediate vicinity would be altered or obstructed?

**A 95 net acre regeneration harvest may be visible briefly in the background from the South Pass County Road 2 to 3 miles northeast of this proposal.**

1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*
☒*No* ☐*Yes, viewing location:*

2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*
☐*No* ☒*Yes, scenic corridor name:*

**Maybe. See B-10-b, above.**

3) *How will this proposal affect any views described in 1) or 2) above?*

**If this proposal is visible, it will appear against a forested background on Sumas Mountain.**

c. Proposed measures to reduce or control aesthetic impacts, if any:

**Riparian and green tree retention on this sale will serve to soften any visual impact it may have.**

**11. Light and Glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

**Does not apply**

b. Could light or glare from the finished project be a safety hazard or interfere with views?

**Does not apply**

c. What existing off-site sources of light or glare may affect your proposal?

**Does not apply**

d. Proposed measures to reduce or control light and glare impacts, if any:

**Does not apply**

**12. Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

**Informal hunting, hiking, and mountain biking.**

b. Would the proposed project displace any existing recreational uses? If so, describe:

**No**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

**None planned**

**13. Historic and Cultural Preservation**

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

**None on record**

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

**None on record**

c. Proposed measures to reduce or control impacts, if any:
*(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)*

**None planned**

**14. Transportation**

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

**S.R. 542, S.R. 547, and S.R. 9. County roads: Siper, Hopewell, Goodwin, Paradise, and South Pass Roads. Refer to the timber sale vicinity map for this proposal.**

1) *Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?*

**No**

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

**Does not apply**

c. How many parking spaces would the completed project have? How many would the project eliminate?

**Does not apply**

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

**This proposal will construct about 11,925 feet of new logging road, 2,273' of which is to be abandoned at the completion of logging.**

*1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?*

**No impact is anticipated. There will be about a 1 mile net increase in the road system.**

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

**Does not apply**

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

**None, after harvest is completed. During peak harvest activity (30-90 days duration), there may be 16 log truck and 4-6 pick up or crew vehicle daylight hour round trips, daily, on the Paradise County Road entering and leaving the South Pass Road, or onto S.R. 542 north of Welcome.**

g. Proposed measures to reduce or control transportation impacts, if any:

**None**

**15. Public Services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

**Does not apply**

b. Proposed measures to reduce or control direct impacts on public services, if any.

**Does not apply**

**16. Utilities**

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

**Does not apply**

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity that might be needed.

**Does not apply**

**C. SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: Kip Kelley Kip Kelley Date: 7-30-04
Title: Deming Unit Forester

Reviewed by: Jeff May Jeff May Date: 11-30-04
Title: District Manager

Approved by: Nicholas Vmichuk for Candace Johnson Date: 12/1/04
Title: Assistant Region Manager